Revue suisse de Zoologie 108 (4): 905-910; décembre 2001

A new species of *Harpactus* Shuckard (Hymenoptera: Sphecidae) from the Balkan Peninsula

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A new species of *Harpactus* Shuckard (Hymenoptera: Sphecidae) from the Balkan Peninsula. - The new species *Harpactus priscus* is described from several localities of Bulgaria, based on five males.

Key-words: Hymenoptera - Sphecidae - *Harpactus* - taxonomy.

INTRODUCTION

Since the first member of the genus *Harpactus* was described in 1792 by Latreille, 101 species and subspecies names have been proposed. A total of 72 species and 7 subspecies are valid now. Species of the genus occur in the Afrotropical, Holarctic and Oriental zoogeographic Regions.

Thirteen species of *Harpactus* are currently known from the Balkan Peninsula: *affinis* (Spinola), *consanguineus* (Handlirsch), *croaticus* Vogrin, *elegans* (Lepeletier), *exiguus* (Handlirsch), *formosus* (Jurine), *laevis* (Latreille), *lunatus* (Dahlbom), *moravicus* (Snoflak), *niger* (A. Costa), *picticornis* Vogrin, *tauricus* Radoszkowsky, and *tumidus* (Panzer) (Handlirsch, 1888, 1895; Maidl, 1922; Vogrin, 1954; de Beaumont, 1965, 1967; Scobiola-Palade, 1967, 1972, 1974; Barbier, 1992; Ljubomirov, 1996; Lyubomirov, 2000 among others). Two of them, *croaticus* and *picticornis* are probably endemic. The species described below is supposed to be endemic as well.

Abbreviations used in description are: AOD, anterior ocellus diameter; OOL, shortest distance from a posterior ocellus to nearer eye margin; POL, shortest distance between posterior ocelli; PD, puncture diameter.

Harpactus priscus sp. n. Figs 1, 3, 5

Material examined : Holotype: male, Bulgaria: Iskar Valley: 1km NW Passarell vill. - 820m, 9. VII. 1995, T. Ljubomirov. Paratypes: 3 males, Bulgaria: Strouma Valley: Yavorov Station - 210m, 1. V. - 1. VI. 1993, Moericke trap, V. Sakalian; 1 male, Bulgaria: Tundza Valley: Lessovo vill. - 80m, 24. V. 1995, I. Stoyanov. Holotype and one paratype (from Strouma Valley; genitalia lost) are deposited in the collection of Muséum d'histoire naturelle, Geneva. Other material is deposited in the authors collection, Institute of Zoology, Bulgarian Academy of Sciences.

Diagnosis

The following combination of features differs *Harpactus priscus* sp. n. from other species of the genus: 1. Body without clear-cut red coloration; 2. Gastral terga

Manuscript accepted 10.04.2001

I-V with ivory white bands at least lateroapically; 3. Propodeal enclosure 1.7x as wide as long, entirely smooth (excluding median longitudinal furrow); 4. Body setae scattered, not concealing integument.

DESCRIPTION (holotype)

Colour. Black with extensive pale coloration. Following structures yellow: scape and pedicel (except black above); flagellum beneath; clypeus; labrum; mandible except reddish brown apex; subantennal sclerite; band along ventral 3/4 of inner orbits (width of band equal to antennal socket diameter); the three apical maxillary palpimeres; collar and pronotal lobe; small spot on tegula; scutellum; small spot on mesosternal surface in front of midcoxae; fore- and midtibiae and tarsi entirely; fore- and midfemora in front, beneath and apically; apical half of fore coxae; apical spots on midcoxae and midtrochanters; extreme apex of hindfemur on outer surface; hindtibiae in front, beneath and apically. Following structures ivory white: transverse subapical band on gastral tergum I, narrowly interrupted in middle and slightly broadened laterally; transverse subapical band on gastral tergum II largely narrowed in middle; transverse subapical bands on gastral terga III and IV almost equal in width medially and laterally; slightly broadened in middle transverse subapical spot on gastral tergum V. Following testaceous to reddish: small spots behind vertex adjacent to orbit, one behind each eye; apical half of gastral tergum I (excluding ivory white coloration); hindtarsi. Wings clear, veins dark brown.

Structure. Head in frontal view subcircular. Clypeus moderately convex, clypeal free margin with translucent lip wide about 1/6 of clypeal height (Fig. 1), clypeal surface finely granulated with shallow punctures which are one diameter apart from each other (PD=1/4 AOD). Labrum finely granulated, dull, its free margin without notch. Frons finely granulated, dull in lower half and relatively shining in upper. On the upper half micropunctures separated by 0.5x of their own diameters (PD=1/8 AOD) as well as macropunctures separated by 1.0-2.0x of their own diameters (PD=1/4 AOD) are present. Diameter of antennal sockets equal to 1.2x AOD, space between antennal sockets - 0.75x AOD, shortest distance between each antennal socket and nearer eye margin equals to AOD, shortest distance between antennal socket and frontoclypeal suture - 0.5x AOD. Vertex shiny, with micropunctures slightly smaller and rather scattered than on upper frons but obviously denser in intraocellar area. OOL:POL=2:1. Posterior ocelli placed at the level of posterior ocular margins. Head behind punctured as vertex but macropunctures become slightly scattered downward. Flagellomeres I to VII without notches, flagellomeres VIII to X each with shallow preapical notch ventrally (notch on flagellomer VIII deepest), flagellomer XI slightly incurved (Fig. 3.). Pronotal collar finely granulated with posterior margin narrowly translucent. Scutum with regular micropunctures separated by 0.5-1.0x their own diameters (PD=1/10 AOD), and with macropunctures separated by 1.0-3.0x of their own diameters (PD=1/4 AOD). Scutellum shiny, with micropunctures sparser than scutal micropunctures and with macropunctures separated by 2.0-6.0x of their own diameters (PD=1/5 AOD). Metanotum with macropunctures same as scutellum, micropunctures are denser forming

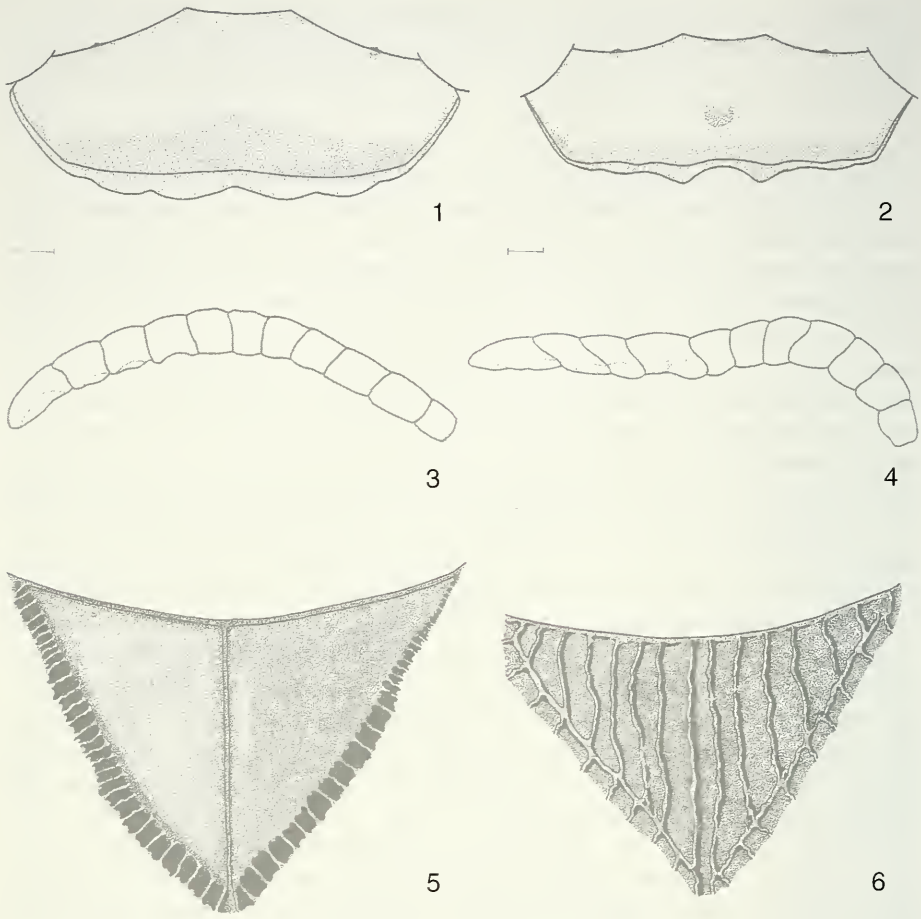
irregular groups. Mesopleuron shiny, with micropunctures separated by 0.5-2.0x of their own diameters (PD=1/8-1/9 AOD) and macropunctures presented mainly in central area where they are separated by 0.5-1.0x of their own diameters (PD=1/3-1/4 AOD). Metapleuron less shiny, with micropunctures same as mesopleuron, without macropunctures. Propodeal enclosure (Fig. 5.) 1.7x as wide as long, smooth, with deep median furrow, with subcontiguous micropunctures (PD=1/10 AOD), and without macropunctures; remaining dorsum sculptured as propodeal enclosure. Hind propodeal surface sculptured as propodeal enclosure but micropunctures are rather scattered and fine: in upper half micropunctures separated by 2.0 - 3.0x of their own diameters but in lower half become 4.0-5.0x of their own diameters. In the upper end of hind propodeal surface just behind the apex of propodeal enclosure is placed deep fossa giving downward median carina. Propodeal sides sculptured as propodeal enclosure but relatively dull before spiracular grooves. First gastral tergum shiny, finely microrugose, with micropunctures separated by 1.0-1.1x of their own diameters (PD=1/9 AOD) slightly sparser in apical half, and macropunctures separated by 2.0 - 4.0x of their own diameters (PD=1/6 AOD). Second gastral tergum shiny, finely transversely microrugose (but coarser than first tergum), with micropunctures separated by 1.0-1.5x of their own diameters (PD=1/8 AOD) and with macropunctures separated by 1.0-2.5x of their own diameters (PD=1/4 AOD). Remaining visible terga (excluding seventh) shiny, with micropunctures separated by 0.5-1.0x of their own diameters (PD=1/8 AOD), and with macropunctures separated by 2.0-4.0x of their own diameters (macropunctures are not present in anterior third of each tergum). Second gastral sternum shiny, finely microsculptured, with micropunctures separated by 1.0-2.0x their own diameters (PD=1/9 AOD), and with macropunctures separated by 1.0-2.0x of their own diameters (PD=1/5 AOD). Remaining visible sterna with the same but somewhat weaker sculpture.

Vestiture. Body setae appressed to suberect, not concealing integument. Upper clypeal half and face under antennal sockets covered with appressed silvery setae as long as 0.6-1.3x AOD. Same type of pubescence occurs on mesopleuron in front of omaulus and ventrally in front of midcoxae, apicolaterally on dorsal propodeal surface and behind spiracular groove on propodeal sides. Rest of the body covered with greyish suberect pubescence (setae averaging about 1.0x AOD excluding vertex, where setae are as long as 1.2-1.3x AOD).

Length. 6.1mm.

Variation

The paratype from Tundza Valley has no reddish coloration behind vertex nor on gastral tergum I; ivory white subapical spot on gastral tergum V is not broadened in middle, whitish subapical bands on gastral terga III and IV are slightly interrupted in middle. Paratypes from Strouma Valley have much more reduced reddish coloration (adjacent just to ivory white coloration) on gastral tergum I compared to the holotype; whitish subapical bands on gastral terga III and IV are slightly interrupted in middle; propodeal enclosure has several irregular obscure rugae in anterior half; gastral sternum II is slightly coarser micropunctured. The paratype from Tundza



FIGS 1-6

1: *Harpactus priscus* sp. n., holotype - clypeus. 2: *Harpactus quinquefasciatus* Kazenas, holotype - clypeus. 3: *Harpactus priscus* sp. n., paratype, Strouma Valley - flagellum. 4: *Harpactus quinquefasciatus* Kazenas, holotype - flagellum. 5: *Harpactus priscus* sp. n., paratype, Tundza Valley - propodeal enclosure. 6: *Harpactus quinquefasciatus* Kazenas, holotype - propodeal enclosure. Scale bars = 0.1 mm.

Valley is slightly smaller than the holotype (6.0mm). Paratypes from Strouma Valley range in length from 4.9 to 5.4mm. Length-width ratio of the last four flagellomeres is presented in Table 1. All examined specimens have two apical midtibial spurs.

ETYMOLOGY

Priscus is a latin adjective meaning ancient, with reference to a combination of plesiomorphic character states in this species (lack of clear-cut red coloration and presence of yellow subapical bands on gastral terga I to V).

TABLE 1. Length-width ratio of the last four flagellomeres in type series.

Material	flagellomere 8	flagellomere 9	flagellomere 10	flagellomere 11
Holotype	11/10	10.10	10/10	11/8
Paratype: Tundza Valley	11/10	10/10	10/10	16/9
Paratype: Strouma Valley	12/8	10/9	9/8	13/7
Paratype: Strouma Valley	10/9	9/9	9/8	14/8
Paratype: Strouma Valley	10/9	9/9	10/9	12/8

DISCUSSION

In most structural respects *H. priscus* sp. n. resembles *H. quinquefasciatus* Kazenas (Kazenas, 1989). The latter is still known by its holotype only (examined) from Betpakdala desert (Kazakhstan). The new species can be distinguished from *quinquefasciatus* by the shape of clypeal free margin (compare Figs 1 and 2), the shape of penultimate flagellomeres (compare Figs 3 and 4), and the sculpture of the propodeal enclosure (compare Figs 5 and 6). There are some additional differences. *H. quinquefasciatus* has clypeal disc swollen in ventral quarter just before clypeal lip. In *H. priscus* sp. n. clypeal disk is evenly convex. *H. quinquefasciatus* has sparser punctuation on frons, scutum, gastral terga I - II and gastral sterna II - III, in the new species these parts are densely punctured. *H. quinquefasciatus* has yellow spotted metanotum, which is black in *H. priscus*. Most of the characters of *H. priscus* sp. n. resemble also those of *H. betpakdalensis* Kazenas from Betpakdala desert (Kazakhstan) (Kazenas, 1988). There are some important differences between the two species. *H. priscus* sp. n. has macropunctures on scutum and scutellum which are lacking in *H. betpakdalensis*. Propodeal enclosure in *H. priscus* n. sp. is smooth, but microreticulated in *H. betpakdalensis* (according to Kazenas`s description). Body setae in *H. priscus* sp. n. are not concealing integument anywhere. In *H. betpakdalensis*, according to Nemkov (1996), vestiture is abundant, concealing integument on mesopleuron and propodeum. The described new species differs from most species of *Harpactus* from Balkan Peninsula in having black/white thorax and smooth propodeal enclosure. The only other *Harpactus* with a black/white thorax and in some degree smooth propodeal enclosure are: *lunatus* (Dahlbom), *niger* (A. Costa), *picticornis* Vogrin, and *tumidus tumidus* (Panzer). In *H. picticornis* the comparison is made following the original description of Vogrin (1954). The four species can be distinguished from *H. priscus* by lacking a pale coloration on gastral terga I, III, and IV. In *H. priscus* gastral terga I - V possess each a pale band. In addition, propodeal enclosure in *H. niger* has few punctures and gastral terga I - II are red in *H. tumidus tumidus*.

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